

## **1.0 NEED FOR AND OBJECTIVES OF THE ACTION**

### **1.1 PURPOSE AND NEED**

The purpose of the project is to provide flood protection in the upper Guadalupe River, from the Southern Pacific Railroad Bridge near Willow Street upstream (southward) 5.5 miles to Blossom Hill Road, in the City of San Jose. Records of flooding in the project area date to 1779, with recent serious events in 1980, 1982, 1983, 1986, and 1995 (COE 1998). The flooding has resulted in bank erosion, debris accumulation, sediment deposition, and significant damage to public structures, including homes and commercial buildings. The potential for future floods thus represents a major public safety concern.

### **1.2 PROJECT AUTHORITY**

The U.S. Army Corps of Engineers' (Corps) study of flood control needs along the Guadalupe River and its tributaries was originally authorized by Section 4 of the Flood Control Act of August 18, 1941. The act directs the Chief of Engineers to carry out preliminary examinations and surveys for flood control in drainage areas within the United States and its territorial possessions, including the Guadalupe River and tributaries in California (COE 1998).

### **1.3 PRIOR STUDIES, REPORTS, AND EXISTING PROJECTS**

#### **1.3.1 Prior to Upper Guadalupe River Feasibility Study**

On June 6, 1945, the Chief of Engineers endorsed the Preliminary Examination Report of Guadalupe River and Tributaries (dated February 28, 1945) and authorized a flood control investigation that combined all the streams draining into San Francisco Bay south of the Dumbarton Narrows. The streams included Guadalupe River, Coyote Creek, San Francisquito Creek, Berryessa Creek, and numerous other creeks; by the 1941 authorization, these streams were reported under the title of Guadalupe River and Adjacent Streams (COE 1998).

The Guadalupe River and Adjacent Streams Investigation was initiated in 1948 but was suspended in 1950, during the Korean War. The study resumed in 1956, with a focus on San Francisquito Creek, at the request of local interests. A report was submitted to the Chief of Engineers in 1961 and was subsequently revised to resolve conflicts related to a proposed multi-purpose reservoir. The revised report made no recommendation for authorization of structural measures. Funds were allocated in Fiscal Year 1963 to resume investigations under the Guadalupe River and Adjacent Streams study authorization. By 1968, the investigation had studied solutions for flood control, which included channel modifications, levees, combinations of the two, off-site floodwater storage modification of the existing reservoir, and construction of additional dams or multipurpose reservoirs. None of these alternatives were found to be justified economically (COE 1998).

The project was placed in deferred status until local interests petitioned to reopen the investigation due to changing development in parts of the study area. Funds to resume the study were allocated by Congress in Fiscal Year 1972. A public meeting held that year resulted in the formation of a local advisory committee. Later, a Board of Directors to the Santa Clara Valley Water District's (SCVWD) flood control program was elected. Later, the SCVWD became the local agency responsible for flood control in the watershed. By 1975, the study had progressed to the point where the Corps had identified five flood problem areas and 29 alternatives as possible solutions. In 1976, the Corps had developed four channelization alternatives for the Guadalupe River and two alternatives were developed for the Baylands area, where the Guadalupe River and Coyote Creek floodplains merge near San Francisco Bay (COE 1998).

In 1980, a Stage 2 Report for the Guadalupe River and Adjacent Streams Investigation was completed. It indicated federal involvement for a flood control project could be justified for the Guadalupe River channel between Interstate Route 880 (I-880) and Park Avenue. In 1985, an Interim Feasibility study was completed that investigated two structural alternatives and a no-action alternative. One alternative was identified as the National Economic Development (NED) plan and the feasibility study report recommended implementation of flood control improvements in the reach between I-880 and I-280. Proposed channel modifications for the segment of the river upstream of I-280 were not economically justified, due to the shallow depth of potential flooding and predominance of residential development in the floodplain

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(COE 1998). Studies of the downtown portion of the Guadalupe River have been completed, and construction of flood control structures is now in progress.

### **1.3.2 Upper Guadalupe River Feasibility Study**

The SCVWD has requested assistance from the Corps in providing flood protection in the vicinity of the upper Guadalupe River. To provide federal assistance, the Corps must first conduct appropriate studies to justify the federal investment to the Office of Management and Budget (OMB) and to Congress. Because federal funding is not guaranteed, or may not be timely, the SCVWD has moved forward with their own studies and design of a project. The SCVWD Guadalupe River Flood Control Project proposes the following: flood control improvements on the upper Guadalupe River from I-280 upstream (southward) to Blossom Hill Road and on Ross Creek to a 100-year level of protection. Improvements to Ross and Canoas Creek would protect against the backwater effects caused by Guadalupe River improvements (Parsons Engineering Science 1997) (see section 6.1.8 for a detailed project discussion). The SCVWD has prepared an EIR/S for the project that has been subject to public review. (Any reader wishing to obtain a copy of the SCVWD EIR/S executive summary may contact Dennis Cheong [SCVWD]).

The Corps is required to investigate several different alternatives for providing flood protection. In order to optimize the size of a project (from an economical point of view) the Corps investigates several different levels of flood protection. The Corps has included a modified version of the SCVWD design as one of several alternatives under investigation. This plan is called the Bypass Channel Plan. It differs from the SCVWD plan in that it does not include any flood control improvement features between I-280 and the Southern Pacific Railroad near Willow Street, nor any features south of Blossom Hill Road. These areas were excluded from the federal studies because they were unlikely to be economically justified.

Thus, there are two studies being conducted for the same general purpose (flood control), but with different scopes and criteria — the federal study (Corps/SCVWD), and the local study (SCVWD). To reduce the amount of paper required to publish the Corps EIS/EIR, studies and data presented in the SCVWD EIR/S (Parsons Engineering Science 1997) have been incorporated into the Corps EIS/EIR by reference.

#### *Planning Process/Feasibility Study*

The Corps of Engineers uses a two-phased planning process to determine whether there is a federal interest in constructing a flood control project. The first phase is called the Reconnaissance Phase. During the Reconnaissance Phase, the Corps compiles existing data to identify the extent and nature of the flood control problem. Once the problem is identified, several alternatives are developed that would alleviate flooding in the study area. Costs and economic benefits (predominantly flood damages prevented) are developed for each alternative. All plans having costs that are greater than the benefits are eliminated from further study. An environmental assessment is usually performed during this phase, during which the proposed plans are provided to the appropriate resource agencies for review. If any of the alternatives studied during the Reconnaissance Phase are economically justified and could be constructed without unreasonable environmental impacts, the second phase of study is recommended.

The second study phase is the Feasibility Phase. During this phase, new information is gathered to develop the reconnaissance phase plans in greater detail. During the Feasibility Phase, a plan must be identified that maximizes the federal investment. This plan is called the National Economic Development (NED) plan. The cost of the NED plan determines to what extent the federal government is able to fund the construction of a project. The Corps studies a range of project sizes in order to ensure that the government does not construct a project which does not maximize the federal investment. Usually, the NED plan is the project that is actually constructed. However, a local sponsor may wish to have a different plan constructed. This is sometimes possible, but the federal government's financial support is limited by the NED plan costs.

#### *Reports Prepared for this Study*

The following reports were prepared by the Corps under the Guadalupe River and Adjacent Streams Investigation authority:

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- *Draft Report of Survey on Guadalupe River and Adjacent Streams for Flood Control and Allied Purposes.* 1961. San Francisco District Corps.
- *Draft Report of Survey on Guadalupe River and Adjacent Streams for Flood Control and Allied Purposes.* 1968. San Francisco District Corps.
- *Phase I Report and Environmental Evaluation of Flood Control Alternatives, Guadalupe River and Adjacent Streams.* 1975. San Francisco District Corps.
- *Progress Report on the Guadalupe River and Adjacent Streams.* 1976. San Francisco District Corps.
- *Information Brochure on Guadalupe River and Adjacent Streams—Survey Investigation.* 1976. San Francisco District Corps in cooperation with the SCVWD.
- *Hydrologic Engineering Office Report: Guadalupe River and Coyote Creek, Santa Clara County, California.* 1977. San Francisco District Corps.
- *Stage 2 Report on Guadalupe River and Adjacent Streams Survey Investigation.* 1980. San Francisco District Corps.
- *Final Guadalupe River Interim Feasibility Report and Environmental Impact Statement.* 1985. San Francisco District Corps.
- *Final Coyote Creek and Berryessa Creek Interim Feasibility Report and Environmental Impact Statement.* 1987. San Francisco District Corps.
- *Final Reconnaissance Report: Upper Guadalupe River Flood Control Study.* 1989. San Francisco District Corps.
- *Guadalupe River General Design Memorandum.* 1991. Sacramento District Corps. This document was prepared for the Highway 880-Highway 280 Guadalupe River studies.
- *Mitigation and Monitoring Plan, Guadalupe River Project, Santa Clara County, California.* 1992. Sacramento District Corps. This document was prepared for the Highway 880-Highway 280 Guadalupe River studies.
- *Sediment Transport Modeling Study of the Upper Guadalupe River, Phase 2.* 1996. Phillip Williams & Associates, Ltd.
- *Upper Guadalupe River Flood Protection Study, Santa Clara County, California.* 1997. San Francisco District Corps.

The SCVWD has also provided the following reports which were used during various Corps studies:

- *Environmental Setting of the Watershed and Floodplain of Guadalupe River, Coyote Creek, and their Tributaries.* 1974. SCVWD.
- *Potential Flood Damages on Guadalupe River and Coyote Creek and Adjacent Streams.* 1974. SCVWD.
- *Study Report for the Guadalupe River from State Route 17 to Curtner Avenue.* 1976. SCVWD.

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- *Guadalupe River Flood Control Planning Study.* 1977, 1981, and 1982. SCVWD.
- *Guadalupe River Watershed Planning Study Draft Engineer's Report.* October 1994. SCVWD.
- *Draft Environmental Impact Report/Environmental Impact Statement for the Guadalupe River Flood Control Project.* 1997. SCVWD.

In addition, the USFWS has prepared a report for the project:

- *Revised Draft Coordination Act Report: Upper Guadalupe River Flood Control Project.* 1997. USFWS.

The flood control alternatives considered during these periods, the conclusions of the 1988 Reconnaissance Report, and the existing (proposed) project are described in Chapter 2.

**1.4 PUBLIC CONCERNS**

The SCVWD held three public scoping meetings on March 7, 13, and 29, 1989 to hear preliminary concerns from communities residing along the river. The Corps also held an initial feasibility study meeting/workshop on March 27, 1991. Major concerns included the following potential effects:

- Housing relocation and policies for compensation and assistance during relocation;
- Removing trees and biological habitat along the river;
- Opportunities for enhancement of biological habitat along the river;
- Increased exposure to Almaden Expressway noise and view degradation resulting from tree removal along the river;
- Elimination of flood zone hazards;
- Increased public access and nuisance to areas adjacent to backyards abutting the river resulting from new flood control access roads;
- Removal of historic landmarks (either city, state, or national) for flood improvements;
- Decrease in property values for those residents who would not be relocated and remain adjacent to river;
- Traffic congestion during construction of flood control improvements; and
- Removal of abandoned cars and trash along the river banks.

An agency scoping meeting was held on February 13, 1990 attended by the Corps, SCVWD, City of San Jose, USFWS, and California Department of Fish and Game (CDFG). The USFWS and CDFG were primarily concerned with impacts on riparian habitat and fisheries. The City of San Jose was concerned with the proposed project's compatibility with the Guadalupe River Park South Master Plan.

The SCVWD held a public hearing on April 3, 1997 to solicit comment on their Draft EIR/S. In addition to the issues listed above, the following concerns regarding the adequacy of the environmental impact analysis were raised (personal communication, William DeJager 1997):

- Concerns with project description including use of set-back levees instead of a bypass channel, bypass location, use of other stabilizing techniques other than gabions, and alternative bridge removals;
- Removal of existing trash and concrete rubble in the river channel;
- Increased access to recreational trail resulting in public safety concerns, including potential for crime that requires security patrols along bypass channels. Also, support for the trail and potential for placing trail under bridges;
- Process of real estate acquisition, need to condemn 30 properties, and requirement for notification of residents within and adjacent to project areas;
- Feasibility of revegetation on gabions, lengthy period for revegetation establishment, potential for leaving existing vegetation unaltered and resulting maintenance of adjacent housing values;

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- Lengthy period for construction (30 years, with a perceived 5-year gap);
- Herbicide use for maintenance and adverse effect on vegetation;
- Siltation during construction, based on downtown flood protection project results;
- Stability of cut bank slopes and effect on adjacent residential recreational spaces (back yards, swimming pools);
- Barriers including low river flows affecting ability for fish to safely pass through the channel, construction impacts on fisheries, and delays in removing existing fish barriers;
- Existing maintenance of the river is inadequate, resulting in public safety issues, illicit dumping, and private fencing;
- Reach 12 development would conflict with a proposed housing project and could possibly induce flooding;
- Visual impacts from construction and vegetation removal; and
- Impacts on non-endangered wildlife.

The Corps held a public hearing on this public draft of this EIR/S October 9, 1997. the following concerns regarding the adequacy of the environmental impact analysis were raised (personal communication, William DeJager 1997):

- Maintenance costs for the project
- Study costs
- Removal of concrete from river
- Do stream restoration alternative instead
- Maintenance of the existing channel, including trash, shopping carts, and vegetation growth
- Maintaining existing habitat
- Oversight of construction- would it be adequate?
- Effectiveness of mitigation questioned
- Effects of downtown project on fisheries and habitat
- Salmon and steelhead trout
- Studies taking too long; project should have been built by now
- Would project really be effective in preventing floods?
- Project is too expensive; do something cheaper like cleaning up the river
- Cleaning up the river is all you need to do to prevent flooding

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- Controlled flooding is needed
- Effect of this project on the downtown project
- Do off-stream storage instead
- Store water in upstream reservoirs instead
- Difficulty in obtaining documents from library
- Maintaining the integrity of the river
- Upstream tributaries are not suitable habitat for anadromous fish
- More people should have been notified of the meeting
- Control development along the river
- Too much emphasis on fish and wildlife; take care of human needs by preventing flooding
- Rental properties operated by the SCVWD
- Flood insurance rates and benefits
- Homeowners have been paying flood insurance premiums all these years, and now they want to raise our local taxes to pay for this project. Where did all the money from our flood insurance premiums go?

### 1.5 PLANNING OBJECTIVES

Federal flood control projects are formulated to reduce potential public hazards and to take advantage of opportunities that contribute to national economic development by increasing output of goods and services. The plan that produces the greatest net economic benefit as measured by subtracting total annualized project costs from total annualized project benefits is referred to as the NED plan. In addition, NED objectives must be accomplished without causing unreasonable adverse impacts on environmental quality (COE 1998).

The development of recreational features is a secondary objective of the flood control project. The Corps maintains a policy for including recreation development in a given project, provided that the recreation facilities are within the flood-control project lands and are not "stand alone" facilities. The SCVWD and the City of San Jose recognize the need to coordinate park master-planning with the flood-control planning. The objective is to balance the need to reduce flood damage with the need to optimize public access and use of the river corridor (COE 1998).

### 1.6 PLANNING CONSTRAINTS

The following Corps planning constraints place limitations on how the Corps planning objective (providing flood protection) is achieved:

- Maximizing net economic benefits;
- Formulating a flood control plan that will be feasible and implementable; and
- Mitigating significant negative environmental impacts if this can be done in a cost-effective manner.

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